

STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft Louisiana Pollutant Discharge Elimination System Permit No. LA0072001; AI 19601; PER20060001 to discharge to waters of the State of Louisiana as per LAC 33:IX.2311.

The permitting authority for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

- I. THE APPLICANT IS:** Town of Grand Coteau
Grand Coteau Wastewater Treatment Facility
P.O. Drawer G
Grand Coteau, LA 70541
- II. PREPARED BY:** Jim Bondy
- DATE PREPARED:** February 21, 2007
- III. PERMIT ACTION:** reissue LPDES permit LA0072001, AI 19601; PER20060001
- LPDES application received: November 16, 2006
- LPDES permit issued: May 1, 2002
LPDES permit expired: April 30, 2007

IV. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the Town of Grand Coteau.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located on Church Street in Grand Coteau, St. Landry Parish.
- D. The treatment facility consists of a one cell primary pond with a 76-day retention, followed by two Lemna polishing cells with Lemna floating barriers and grids. The second Lemna polishing cell has five aerators. Disinfection is by ultraviolet light.

E. Outfall 001

Discharge Location: Latitude 30° 26' 28" North
Longitude 92° 2' 30" West

Description: treated sanitary wastewater

Design Capacity: 0.163

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

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V. RECEIVING WATERS:

The discharge is into an unnamed ditch; thence into Bayou Bourbeux; thence into Bayou Fusilier; thence into the Vermilion River in segment 060801 of the Vermilion - Teche Basin.

The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in the table below^{1/}:

Overall Degree of Support for Segment	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Partially Supported	Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	Fully Supported

^{1/}The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 060801 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

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Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Jim Bondy, Water Permits Division
 Department of Environmental Quality
 Office of Environmental Services
 P. O. Box 4313
 Baton Rouge, Louisiana 70821-4313

IX.

PROPOSED PERMIT LIMITS:

Subsegment 060801 of the Vermilion - Teche River Basin is not listed on LDEQ's Final 2004 303(d) list of impaired waterbodies. However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen, cadmium, lead, organic enrichment/low DO, pathogen indicators, salinity/TDS/chlorides, sulfates, suspended solids/turbidity/siltation, and Carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The *1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen*, was revised in December 1999, and approved by EPA on April 5, 2001. This TMDL re-established that NPDES permits for individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

FLOW RATE

greater than 25,000 gpd

25,000 gpd or less

PERMIT LIMITSMay - Dec.: 10 mg/l CBOD₅/5 mg/l NH₃-N/5 mg/l DOJan.- April: 20 mg/l CBOD₅/10 mg/l NH₃-N/5 mg/l DO

secondary limits year round

Therefore, this discharge will be permitted accordingly.

The *Vermilion River TMDL for Fecal Coliform* was finalized on April 5, 2001, addressing the presence of pathogen indicators in the watershed. As per this TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL."

The *Vermilion River TMDL for Sulfate Subsegments 060801 & 060802*, finalized on May 23, 2001, established monthly average load limitations for all significant point source dischargers in these subsegments. However, due to a change in the standards for sulfate in subsegment 060801, it was determined that this subsegment was in compliance with the new sulfate standard. Therefore, a limitation for sulfate will not be placed into the permit.

As per the *TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin*, point source loads are so small as to be insignificant, and because effective policies are in place to limit TSS discharges, no specific reductions from point sources are required.

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The TMDL for the Pesticide Carbofuran in the Mermentau and Vermilion-Teche River Basins was finalized on March 21, 2002, and states no point sources are known to discharge Carbofuran; therefore, no allocation was given to point source discharges in the Vermilion-Teche River Basin.

As per the February 29, 2000 Delist (Federal Register Notice: Vol. 65, Num. 173, pages 54032-54034, 9/6/2000), assessment of new data and information shows this segment is meeting water quality standards for Phosphorus, Cadmium, and Lead. Therefore, requirements for Total Phosphorus, Total Cadmium, and Total Lead will not be placed in this permit.

As per the October 2000 LA TMDL Delist (Federal Register Notice: Vol. 66, Num. 66, pages 18087-18089, 4/5/2001), assessment of new data and information shows this segment is meeting water quality standards for chlorides, salinity and TDS. Therefore, requirements for these parameters will not be placed in this permit.

Final Effluent Limits:**OUTFALL 001**

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
CBOD ₅ May – December January - April	13.6 27.2	10 mg/l 20 mg/l	15 mg/l 30 mg/l	Limits are set in accordance with the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen for dischargers with flows greater than 25,000 GPD.
TSS May – December January - April	20.4 27.2	15 mg/l 20 mg/l	23 mg/l 30 mg/l	Limits are set through BPJ in accordance with the previous LPDES permit.
NH ₃ -N May – December January - April	6.8 13.6	5 mg/l 10 mg/l	10 mg/l 20 mg/l	Limits are set in accordance with the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen for dischargers with flows greater than 25,000 GPD.
Dissolved Oxygen	N/A	5 mg/l*	N/A	Limits are set in accordance with the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen for dischargers with flows greater than 25,000 GPD.

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*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:**1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X.**PREVIOUS PERMITS:**

LPDES Permit No. LA0072001: Effective Date: May 1, 2002

Expiration Date: April 30, 2007

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Daily Avg.</u>	<u>Daily Max.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	Continuous	Recorder
CBOD ₅				
May – December	10 mg/l	15 mg/l	2/month	Grab
January – April	20 mg/l	30 mg/l	2/month	Grab
TSS				
May – December	15 mg/l	23 mg/l	2/month	Grab
January – April	20 mg/l	30 mg/l	2/month	Grab
Ammonia-Nitrogen	5 mg/l	10 mg/l	2/month	Grab
Dissolved Oxygen	5 mg/l minimum		2/month	Grab
Fecal Coliform				
Colonies/100 ml	200	400	2/month	Grab
pH	Range (6.0 su – 9.0 su)		2/month	Grab

The permit contains pollution prevention language.

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XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:**A) Inspections**

A review of the files indicates that the following most recent inspection was performed.

Date – December 16, 2005

Inspector - LDEQ

Findings and/or Violations -

1. A DMR review for the timeframe of January 1 through September 30, 2005 revealed several TSS exceedences. Harvesting and redistribution of duckweed was increased to decrease the TSS in the effluent. Also, there were several Fecal Coliform exceedences. The cause of the exceedences was an obsolete ultraviolet treatment unit. A new unit went online on 11/11/05.
2. The flow meter was out for several months and flow was estimated. The meter was replaced on 10/28/05. Loadings were unable to be calculated while the meter was down.
3. There are severe I&I problems which the Town is working to correct.

B) Compliance and/or Administrative Orders

A review of the files indicates the most recent enforcement action administered against this facility is Consolidated Compliance Order and Notice of Potential Penalty (WE-CN-05-0226) issued on February 24, 2006. This action is the result of a history of non-compliance issues and other recent compliance orders issued to the facility. The Order requires the facility to address non-compliance problems and attain compliance with LPDES Permit LA0072001. See the attached copy of WE-CN-05-0226.

C) DMR Review

A review of the discharge monitoring reports for the period beginning January 1, 2005 through December 31, 2006 has revealed the following violations:

Month	Parameter	DMR Reported Value	Permit Limit
March 2005	TSS, Monthly Avg.	26 mg/l	20 mg/l
	TSS, Weekly Avg.	32 mg/l	30 mg/l
April 2005	Fecal Coliform, Monthly Avg.	>1000 colonies/ml	200 colonies/ml
	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
May 2005	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
June 2002	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
July 2005	Fecal Coliform, Monthly Avg.	>1000 colonies/ml	200 colonies/ml
	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
August 2005	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
September 2005	Fecal Coliform, Monthly Avg.	>1000 colonies/ml	200 colonies/ml
	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
October 2005	Fecal Coliform, Monthly Avg.	308 colonies/ml	200 colonies/ml
	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
November 2005	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
February 2006	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
March 2006	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
September 2006	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml
October 2006	Fecal Coliform, Weekly Avg.	>1000 colonies/ml	400 colonies/ml

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XII. ADDITIONAL INFORMATION:

The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 0.163 MGD.

Effluent loadings are calculated using the following example:

$$\text{CBOD}_5: 8.34 \text{ lb/gal} \times 0.163 \text{ MGD} \times 10 \text{ mg/l} = 13.6 \text{ lb/day}$$

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.10 and 0.50 MGD.

<u>Effluent Characteristics</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recorder
CBOD ₅	2/month	Grab
Total Suspended Solids	2/month	Grab
Ammonia-Nitrogen	2/month	Grab
Dissolved Oxygen	2/month	Grab
Fecal Coliform Bacteria	2/month	Grab
pH	2/month	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, general pretreatment language will be used due to the lack of either an approved or required pretreatment program.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a reissue permit for the discharge described in this Statement of Basis.

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REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Town of Grand Coteau, Grand Coteau Wastewater Treatment Facility, November 16, 2006.